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FEATURE

CURRENT SERIAL RECORDS

FOREST PLANS LIMITED BY DECISION SPACE

One of the more difficult problems National Forest planners and decisionmakers face is the evaluation of the numerous management alternatives. The management of many resources and uses and their interrelationships must be considered all at the same time. Resource levels also must be evaluated in relation to public needs and potential maximum outputs.

In the early days of National Forest planning, each resource was looked at separately, but soon it became obvious that few resources could be managed independent of the others. Maximizing the use of one resource is often detrimental to another. There are obvious conflicts between needs and demands for various forest resources.

The National Forest Management Act of 1976 recognized these conflicts and specified the steps to be taken in development of a comprehensive management plan for each National Forest. The planner is given a process or "road map" to follow but soon learns that the road is very rocky.

The first step identified in the process is a thorough examination of the issues, concerns, and opportunities affecting the various elements within the forest. Issues may represent widely diversified viewpoints like those separating back-country hikers from loggers. Concerns may be expressed by those who fear disruption of wildlife habitat by the road building required for other forest users. Opportunities may conflict also. One study of the forest may identify the land area biologically suitable for tree growing, but all of that land is not available for harvest.

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(Decision Space-2-2-2)

In every instance planners are faced with constraints--constraints that limit their ability to maximize any one output. The maintenance of a viable wildlife population means that some areas must be dedicated to that use. The legal designation of other areas--wilderness for example--removes additional land from consideration. Other constraints or issues can affect the availability of all resources.

The planner's ability to evaluate the output or use of a given resource is limited then by the range between minimum levels and maximum potential levels resulting from legal, environmental or biological constraints. The area between is referred to as the "decision space."

Once the decision space has been defined for a particular resource, the planner proceeds to develop alternatives within the decision space. The star diagrams, illustrated here, help to display a range of alternatives and interrelationships.

Each spoke in the star diagrams represents a single resource or use. The outer end represents 100 percent of the potential output while the hub is zero. The planner plots the output actually used in an alternative and connects the points on each spoke to create the diagram. The shaded area represents the amount of decision space available in each alternative.

By using the same resources and varying the outputs based on issues, concerns, or other constraints, the planner can demonstrate the effect of each decision on the other resources. The star diagrams display what happens when two widely differing emphases are used. One alternative places strong emphasis on timber harvest (Figure 1) while the other places emphasis on retention of natural conditions (Figure 2).

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(Decision Space-3-3-3)

These star diagrams can be varied by use of different resources and thus provide a valuable tool for comparison of alternatives in the search for ideal land management solutions.

Each National Forest is different and the potential use of each varies with differences in geography, climate, vegetation, and public needs. Therefore, it is important that the public be aware of the realistic decision space available to meet the needs of both the people and the resources.

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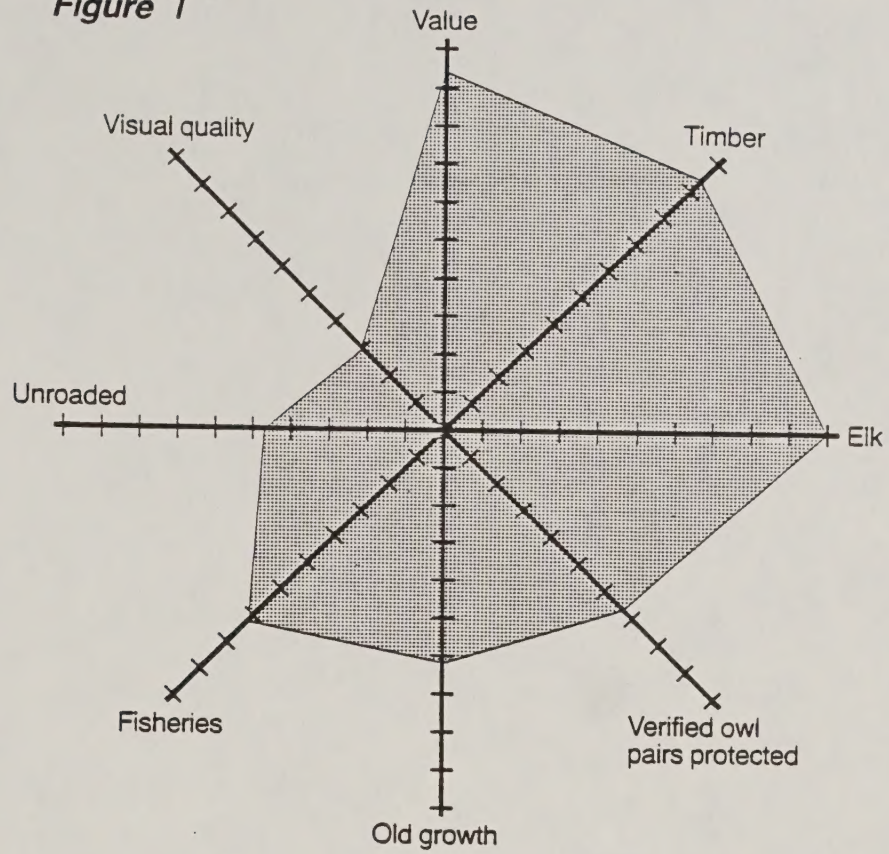
Attachment

Dave Eccles, the author, works under the Senior Community Service Employment Program in the Information Office of the Pacific Northwest Regional Office of the USDA Forest Service in Portland, Oregon.





**Figure 1**



**Figure 2**

